

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte CHARLES J. RUNKLE,
AMITAVA SENGUPTA and
TONY R. VIDO

Appeal 2007-0838
Application 09/851,242
Technology Center 1700

Decided: October 29, 2007

Before CHARLES F. WARREN, PETER F. KRATZ, and
CATHERINE Q. TIMM, *Administrative Patent Judges*.

KRATZ, *Administrative Patent Judge*.

DECISION ON APPEAL

1 This is a decision on an appeal from the Examiner's final rejection of claims 1, 2, 4, 5, 16-19, and 21-27. Claims 6-15 are the only other claims that remain pending in this application. The latter claims stand withdrawn from further consideration by the Examiner as drawn to a non-elected invention. We have jurisdiction pursuant to 35 U.S.C. §§ 6 and 134.

Appellants' invention is directed to a method of making a hollow fiber membrane contactor wherein a hollow fiber fabric is wound around a center tube. The method includes two potting steps.¹ The hollow fiber fabric and tube are potted together in a first potting step to form a unitized structure (the fabric being wound around the tube). The unitized structure formed from the potted together fabric and tube is placed in a shell and the unitized structure and shell are mold potted together in a second potting step so as to form a cartridge. A potting material is injected in a space between the unitized structure and shell in the second potting step to form a cartridge. The cartridge is useful in forming a hollow fiber membrane contactor. The disclosed method for producing contactors is juxtaposed with a disclosed need for producing contactors that have minimal or no problems (such as potting to shell sealing) associated with potting shrinkage (Specification 2 and 3). Claims 1 and 21 are illustrative and reproduced below:

1. A method of making a hollow fiber membrane contactor comprising the steps of:

winding a hollow fiber fabric around a center tube,

first potting the fabric and the tube together,

¹ The term "potting" as employed herein is understood to embrace a cementing or adhesive joining step. A potting material or agent, such as a thermosetting material (e.g., epoxy resin) or a thermoplastic material (e.g., polyurethane or polyolefin), is used to effect the joining together of the unitized structure and shell in the second mold potting step (claims 1, 16 and 21). The same or a different potting material can be used in the first potting step. The potting material typically undergoes a curing or hardening step. See, for example *Specification* 7-10.

forming thereby a unitized structure,

placing the structure into a shell,

second mold potting the structure and the shell together by injecting a
potting material into a space between the structure and the shell, and

forming thereby a cartridge.

21. A method of making a hollow fiber membrane contactor
comprising the steps of:

winding a hollow fiber fabric around a center tube to a diameter of at
least six inches,

bead potting the fabric and the tube together,

forming thereby a unitized structure,

placing the structure into a shell,

mold potting the structure and the shell together by injecting a potting
material into a space between the structure and the shell, and

forming thereby a cartridge.

In addition to an asserted admission of prior art by Appellants, the
Examiner relies on the following prior art references as evidence in rejecting
the appealed claims:

Bikson	4,800,019	Jan. 24, 1989
Caskey	4,961,760	Oct. 9, 1990
Mancusi	5,186,832	Feb. 16, 1993
Huang	5,284,584	Feb. 8, 1994
Marui (as translated)	JP 11-169676	Jun. 29, 1999

Nineteen grounds of rejection are maintained by the Examiner as follows:

A. Claims 1, 16, and 19 stand rejected under 35 U.S.C. § 102(b) as being anticipated by JP 11-169676.

B. Claim 2 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over JP 11-169676 in view of Mancusi.

C. Claims 17 and 18 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over JP 11-169676 in view of Caskey.

D. Claims 4 and 5 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over JP 11-169676 in view of Bikson.

E. Claims 21, 24, and 27 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over JP 11-169676 in view of Applicants' admitted prior art.

F. Claims 22 and 23 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over JP 11-169676 in view of Applicants' admitted prior art and Bikson.

G. Claims 25 and 26 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over JP 11-169676 in view of Applicants' admitted prior art and Caskey.

H. Claims 1, 2, 4, 5, and 19 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Mancusi in view of Bikson.

I. Claims 1, 2, and 19 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Mancusi in view of JP 11-169676.

J. Claims 4 and 5 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Mancusi in view of JP 11-169676 and Bikson.

K. Claims 16-18 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Mancusi in view Bikson and Caskey.

L. Claims 16-18 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Mancusi in view of JP 11-169676 and Caskey.

M. Claims 21 and 27 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Mancusi in view of JP 11-169676 and Applicants' admitted prior art.

N. Claims 22 and 23 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Mancusi in view of JP 11-169676, Applicants' admitted prior art and Bikson.

O. Claims 24-26 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Mancusi in view of JP 11-169676, Applicants' admitted prior art and Caskey.

P. Claims 1, 2, 4, 5, 16, 18, and 19 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Huang in view of Mancusi and Bikson.

Q. Claim 17 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Huang in view of Mancusi, Bikson, and Caskey.

R. Claims 21-24, 26, and 27 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Huang in view of Mancusi, Bikson, and Applicants' admitted prior art.

S. Claim 25 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Huang in view of Mancusi, Bikson, Applicants' admitted prior art, and Caskey.

We reverse rejections A through G. We affirm the remaining Rejections H through S. Our reasoning follows.

Anticipation Rejection A

To anticipate a claim, a prior art reference must disclose every limitation of the claimed invention, either explicitly or inherently. *In re Schreiber*, 128 F.3d 1473, 1477, 44 USPQ2d 1429, 1431 (Fed. Cir. 1997). Here, each of rejected claims 1, 16 and 19 require a winding step wherein a hollow fiber fabric is wound around a center tube.

The Examiner maintains that JP 11-169676 describes a method that anticipates appealed claims 1, 16, and 19 (Answer 3-4: JP 11-169676, ¶ 0026).

Appellants contend that the Examiner's anticipation rejection is in error because the Examiner has not established, *inter alia*, that JP 11-169676 describes a step of winding a hollow fiber fabric around a center tube as part of a contactor forming method.²

It is well settled that the burden of establishing a prima facie case of anticipation resides with the Patent and Trademark Office (PTO). *See In re Piasecki*, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984). In the case before us, the Examiner has not fairly pointed out where JP 11-169676 describes a method including a step wherein a hollow fiber fabric is wrapped around a center tube. In this regard, the Examiner points to ¶ 0026 of JP 11-169676 as describing such a step (Answer 3). However, our review of the referred to paragraph of the applied reference reveals no such description. It follows that we shall reverse the Examiner's anticipation rejection of claims 1, 16 and 19 over JP 11-169676 on this record.

§ 103 Rejections

² Our references to the Brief herein are to the Brief filed on January 10, 2006, unless otherwise specified.

Under 35 U.S.C. § 103, the factual inquiry into obviousness requires a determination of: (1) the scope and content of the prior art; (2) the differences between the claimed subject matter and the prior art; (3) the level of ordinary skill in the art; and (4) any secondary considerations. *Graham v. John Deere Co.*, 383 U.S. 1, 17-18, 148 USPQ 459, 467 (1966). “[A]nalysis [of whether the subject matter of a claim is obvious] need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ.” *KSR Int’l Co. Teleflex, Inc.*, 127 S. Ct. 1727, 1741, 82 USPQ2d 1385, 1396 (2007) *quoting In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006). *See DyStar Textilfarben GmbH & Co. Deutschland KG v. C.H. Patrick Co.*, 464 F.3d 1356, 1361, 80 USPQ2d 1641, 1645 (Fed. Cir. 2006)(“The motivation need not be found in the references sought to be combined, but may be found in any number of sources, including common knowledge, the prior art as a whole, or the nature of the problem itself.”). The analysis supporting obviousness, however, should be made explicit and should “identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements” in the manner claimed. *KSR*, 127 S. Ct. at 1741, 82 USPQ2d at 1396.

Rejections B-G

We reverse the Examiner’s obviousness rejections employing JP 11-169676 as a primary reference. This is because these separate obviousness rejections are all predicated on the presumption that JP 11-169676 describes the subject matter required by independent claim 1

(Answer 4-8). However, as stated above, it is our determination that the Examiner has not established that JP 11-169676 describes a process corresponding to the appealed claim 1 process on this record. Thus, this common deficiency in the Examiner's application of JP 11-169676 infects each of the separate obviousness Rejections B-G with reversible error. Also, the Examiner has not articulated a rationale that fairly explains why the teachings of the applied secondary references as further utilized in Rejections B and D-G would be fairly combinable with the assembly of a device of the type that JP 11-169676 is concerned with forming in a manner so as to modify the JP 11-169676 assembly method to include a step of winding a hollow fiber fabric around a center tube as required by the appealed claims rejected in Rejections B and D-G (Reply Br. 13). It follows that, on this record, we shall reverse the Examiner's obviousness rejections B-G, which rejections employ JP 11-169676 as a primary reference.

Rejection H

Claims 1, 2, 4, 5, and 19 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Mancusi in view of Bikson. Appellants argue the claims as a group. Hence, we select claim 1 as the representative claim on which we decide this appeal as to this ground of rejection.

The Examiner has determined that:

Mancusi *et al.* ('832) teach the basic claimed process of making a hollow fiber membrane separation device (contactor) including, providing a core, wrapping a hollow fiber fabric onto said core (winding), potting the fabric and the core together to form an assembly (first potting), placing the assembly in a housing (shell) and potting the assembly and the housing interior to form a cartridge (second potting) (see col. 8, lines 44-48, col. 9, lines 1-7 and 60-68 and col. 9, lines 41-60).

Further, it should be noted that Mancusi *et al.* ('832) specifically teach potting of the tube-sheets to the interior of the housing (see col. 9, lines 22-27). Furthermore, Mancusi *et al.* ('832) teach that the potting between the fabric and the core occurs by putting down continuous resinous potting material lines (bead-potting) (see col. 10, lines 45-50).

Regarding claim 1, although Mancusi *et al.* ('832) teach a second potting step, Mancusi *et al.* ('832) do not specifically teach mold potting. Bikson *et al.* ('019) teach a process for forming a hollow fiber membrane contactor cartridge including, providing a mold, inserting the ends of a plurality of hollow fiber (3) bundles into the mold and injecting a resinous material into the mold to form tube-sheets (1) that are integral with the housing (see col. 4, lines 48-68). Therefore, it would have been obvious for one of ordinary skill in the art to have used mold potting as an alternative to gravity or centrifugal potting as taught by Bikson *et al.* ('019) in the process of Mancusi *et al.* ('832) because, Bikson *et al.* ('019) teach that mold potting is one of many equivalent procedures available to one ordinarily skilled in the art and also because, both references teach similar products and processes and solve the similar problem of potting in a process of making a hollow fiber membrane separation device (contactor). It is submitted that a space must exist between the exterior of the fiber bundles and, the mold and the housing, in order for the resin to penetrate between said spaces, such that mold potting occurs as described in the process of Mancusi *et al.* ('832) in view of Bikson *et al.* ('019).

(Answer 9-10).

Appellants do not specifically argue with the Examiner's determination that Mancusi discloses or suggests a method for forming a hollow fiber membrane contactor that includes a hollow fiber fabric winding step, a potting step corresponding to Appellants' representative claim 1 first potting step to form a unitized structure, and a step corresponding to the

representative claim 1 placing of the structure into a shell. *See* the Brief and the Reply Brief³ in their entirety.⁴ Rather, Appellants contend that:

The Examiner has failed to show that the combined teachings of the prior art references cited against the instant Application discloses all of the required features of the instant invention, i.e., two potting steps. [The] Examiner's argument is based on the notion that *Mancusi* discloses two potting steps. However, as explained throughout the prosecution of the instant Application, the Applicant has shown that *Mancusi* does not teach two potting step[s]. (See Applicant's Reply Brief to Examiner's Supplemental answer', Dated May 18, 2005, Page 5, Line 11 to Page 10, line 2).

Therefore, the Examiner has failed to show that the combined teachings of the prior art references cited against [the] instant Application discloses all of [the, sic] required features of the instant invention, i.e., two potting steps.

Additionally, it is a burden upon the Examiner to show a suggestion or motivation to modify the teachings of the prior art references cited against the instant Application to achieve the required features of the instant invention, i.e., two potting steps. The Examiner, however, fails to show any suggestion or motivation to modify the teachings of the prior art references cited against the instant Application to achieve the required features of the instant invention, i.e., two potting steps.

(Br. 20-21).

In addition, Appellants make reference to a Declaration of Charles Runkle, one of the named co-inventors of the subject application, as well as

³ Our references to the Reply Brief herein are to the Reply Brief filed May 15, 2006 unless otherwise specifically indicated.

⁴ Arguments not made in the Briefs are considered to be waived. *See* 37 C.F.R. § 41.37(c)(vii) (2007).

a named co-inventor of the applied prior art Mancusi reference (Reply Br. 18-20) in support of the asserted lack of a teaching of two potting steps in Mancusi. The Declaration of Charles Runkle was submitted on December 23, 2002 (Certificate of Mailing dated December 17, 2002) as part of a Reply to a non-final Office Action. However, the Brief does not include a copy of the Declaration of Charles Runkle or make reference thereto in an Appendix thereof.

Hence, the principal issues before us with respect to this ground of rejection are: Have Appellants identified reversible error in the Examiner's obviousness rejection of representative claim 1 based on the asserted lack of a teaching or suggestion of the second potting step in Mancusi and/or the asserted lack of reason or suggestion to modify Mancusi taken with Bikson in a manner so as to result in the claimed subject matter including the use of a second potting step based on the evidence of record?

We answer these questions in the negative. Hence, we affirm the Examiner's Rejection (H); that is, the rejection of claims 1, 2, 4, 5, and 19 under 35 U.S.C. § 103(a) as being unpatentable over Mancusi in view of Bikson for the reasons set forth in the Answer and below.

Mancusi discloses that after a winding and a potting step, the structure formed from the potted wound hollow fiber fabric and core tube is placed in a shell (housing) and sealed to an interior of the housing (shell) to form a cartridge (col. 8, l. 8 – col. 9, l. 27).

The Examiner basically maintains that the sealing step of Mancusi with or without Bikson's asserted disclosure of mold potting would have taught or suggested that one of ordinary skill in the art should employ a

second potting step corresponding to the second potting step of representative appealed claim 1 as an available option as part of sealing or putting together the structure formed from the potted wound fabric and tube with the shell employed as a housing for the structure (Answer 8-10 and 27-29). We agree. In this regard, Mancusi reasonably suggests the option of employing additional potting material in securing or sealing the potted wound fabric and tube structure (potted bundle) to a housing (shell) in which the potted bundle is fitted, as one option (col. 10, ll. 54-57). This disclosed option for fitting or sealing the potted bundle inside the housing or shell would have been reasonably suggestive of the second potting step of appealed representative claim 1 to one of ordinary skill in the art.⁵ In addition, the additionally relied upon Bikson (U.S. Patent No. 4,800,019) further teaches that a hollow fiber bundle tube sheet can be directly bonded to the shell, which latter teaching would have further suggested using a second potting step to bond the potted fiber bundle to a shell (Bikson; col. 9, ll. 35-36).

In light of the above, Appellants' contentions that Mancusi alone or in combination with Bikson would not have taught or suggested the here claimed two potting steps are not persuasive. In this regard, we note that the

⁵ Indeed. Mancusi incorporates by reference Caskey (U.S. Patent No. 4,961,760 in the portion of the Mancusi disclosure discussing how the potted bundle is fitted into and sealed to a housing (Mancusi; col. 9, ll. 18-50). The incorporated by reference Caskey, which is also of record and cited as evidence being relied upon by the Examiner in the Answer, includes a Figure 2 embodiment wherein the casing (housing) is bonded to the potted bundle tubesheet by resin bonds (Caskey; col. 16, ll. 2-5). That incorporated by reference disclosure lends further support to the Examiner's obviousness determination over the teachings of Mancusi.

Runkle Declaration of record that is referenced in the Reply Brief is not persuasive in that the asserted use of o-rings for forming a seal would have been reasonably understood by one of ordinary skill in the art as representing an alternative or adjunct to the disclosed option of using an adhesive or potting material between the housing (casing or shell) and the potted tube bundle.⁶ It is instructive to note that the Runkle Declaration does not address the relevant portions of the disclosure of Mancusi and Bikson, as discussed above.

Furthermore, we are not persuaded by Appellants' arguments to the extent that Appellants may be asserting that Mancusi is referring to yet another embodiment wherein only a single potting step is employed when the housing interior is bonded to the bundle ends; that is an embodiment wherein a first potting step has not yet occurred at the time of the shell casing bonding or potting step. In this regard, we note that Mancusi reasonably would have suggested to one of ordinary skill in the art that a potted bundle can be fitted into a casing wherein the *potted* bundle is adhered or sealed to the housing casing with a potting material or adhesive, as an option (col. 10, ll. 54-60). After all, skill and not the converse is expected of one of ordinary skill in the art. *See In re Sovish*, 769 F.2d 738,

⁶ The Examiner addressed the Runkle Declaration in the Examiner's Answer mailed March 29, 2005 (pp. 19-22). In this regard, we note that the Runkle Declaration was not attached to the Brief and the Evidence Appendix accompanying the Brief does not include the appropriate information with respect to the Runkle Declaration as required by 37 C.F.R. § 41.37(c)(ix). Thus, Appellants' criticism of the Examiner in the Reply Brief is unavailing (Reply Br., 15, 16, 18, and 19). In any event and to the extent the Runkle Declaration may be considered before us in light of the references thereto in the Reply Brief, such evidence is not persuasive of reversible error in the Examiner's rejection for reasons stated herein.

226 USPQ 771 (Fed. Cir. 1985). Moreover, the additional disclosure of Bikson with regard to bonding the hollow fiber bundle tubesheet to a shell (col. 9, ll. 35-36) further supports the Examiner's obviousness position with regard to the obviousness of employing two potting steps, as called for in representative appealed claim 1.

As a final, point, we note that Appellants have not presented any comparative evidence, much less persuasive evidence, to establish that the claimed process is attended by anything other than expected results. In this regard, persuasive argument and/or convincing evidence has not been presented to establish that the potting shrinkage problem referred to in the Specification is non-obviously addressed or solved by the broadly recited method steps of representative claim 1 (Specification 2).

It follows that, on this record, we shall sustain the Examiner's obviousness rejection (Rejection H) of claims 1, 2, 4, 5, and 19 under 35 U.S.C. § 103(a) as being unpatentable over Mancusi in view of Bikson. Rejections I through S

As set forth in the Reply Brief, Appellants' arguments against the Examiner's separate Rejections I through S, all of which rejections employ Mancusi for teaching two potting steps, focus on the asserted lack of a teaching of two potting steps by Mancusi, and the assertion that the Runkle Declaration refutes the Examiner's position as to the teachings of Mancusi (Reply Br. 15 and 17-19). In the Brief, Appellants rely primarily on their arguments against Mancusi for failing to teach or suggest two potting steps and do not otherwise specifically contest the Examiner's reliance on the other applied references for teaching auxiliary features of the various claims

subject to each of Rejections I through S. For the reasons presented above, we do not find these arguments and the Runkle Declaration persuasive.

Concerning Rejection I; that is, the Examiner's rejection of claims 1, 2, and 19 under 35 U.S.C. § 103(a) as being unpatentable over Mancusi in view of JP 11-169676, Appellants argue the claims together. Consequently, we select claim 1 as the representative claim for this ground of rejection. As we note above, Appellants present substantially the same arguments in the Brief with respect to Rejection I as were presented against Rejection H.

For the reasons stated above, the teachings of Mancusi are sufficient to render the subject matter of claim 1 *prima facie* obvious. Appellants do not argue for the patentability of representative claim 1 on the basis of any asserted patentable difference between mold potting and the second potting step suggested by Mancusi. As such, we need not further discuss the Examiner's reliance on JP 11-169, 676 with regard to this ground of rejection and we affirm this ground of rejection for substantially the reasons presented above and in the Answer.

Likewise, we affirm Rejections J through O as presented in the Answer for the reasons stated above with respect to Rejection H. In this regard, Appellants do not contest the Examiner's reliance on the additionally cited prior art teachings as cited in Rejections J through O for teaching or suggesting the additional claimed features associated with the claims subjected to any of Rejections J through O. Rather, Appellants' arguments are principally based on the asserted shortcomings of Mancusi with regard to teaching or suggesting two potting steps as further buttressed by Appellants' reliance on the Runkle Declaration.

These arguments and their asserted evidentiary support are unpersuasive for the reasons stated above in our discussion of Rejection H. Hence, we shall also affirm: (1) the Examiner's rejection of claims 4 and 5 under 35 U.S.C. § 103(a) over Mancusi in view of JP 11-169, 676 and Bikson (Rejection J); (2) the Examiner's rejection of claims 16-18 under 35 U.S.C. § 103(a) over Mancusi in view of Bikson and Caskey (Rejection K); the Examiner's rejection of claims 16-18 under 35 U.S.C. § 103(a) over Mancusi in view of JP 11-169, 676 and Caskey (Rejection L); the Examiner's rejection of claims 21 and 27 under 35 U.S.C. § 103(a) over Mancusi in view of JP 11-169, 676 and Applicants' admitted prior art (Rejection M); the Examiner's rejection of claims 22 and 23 under 35 U.S.C. § 103(a) over Mancusi in view of JP 11-169, 676, Applicants' admitted prior art, and Bikson (Rejection N); and the Examiner's rejection of claims 24-26 under 35 U.S.C. § 103(a) over Mancusi in view of JP 11-169, 676, Applicants' admitted prior art, and Caskey.

Concerning rejection P: that is, the Examiner's rejection of claims 1, 2, 4, 5, 16, 18, and 19 under 35 U.S.C. § 103(a) as being unpatentable over Huang in view of Mancusi and Bikson, Appellants argue the rejected claims as a group. Thus, we select claim 1 as the representative claim on which we decide this appeal as to this ground of rejection.

Appellants do not specifically contest the Examiner's determination that it would have been obvious to employ the cartridge formation technique of Mancusi in combination with the hollow fiber membrane assembly formation method of Huang in forming a separation device (contactor). Nor do Appellants specifically contest the Examiner's additional reliance on

Bikson for suggesting mold potting. Rather, Appellants basically maintain that such a combination would not result in a method of forming the hollow fiber membrane contactor using two potting steps because Mancusi does not teach or suggest two potting steps (Br. 32 and 33). However, for the reasons set forth above with respect to the Examiner's Rejection H, we disagree with Appellants' arguments with respect to the teaching or suggestion of two potting steps by Mancusi with or without Bikson. In addition, we further note that Huang teaches or suggests that a potted bundle of hollow fiber fabric wrapped around a tube is fitted in a suitable housing (shell) and the bundle tube sheets are sealed to the interior of the housing by using solvent resistant resin (a second potting), as an option (Huang; col. 8, l. 31 – col. 9, l. 16 and col. 13, l. 32 – col. 15, l. 7). As such, Appellants arguments and asserted Runkle Declaration are not persuasive in asserting that the evidence relied upon by the Examiner would not have taught or suggested two potting steps, as called for in representative claim 1.

Accordingly, we shall also affirm the Examiner's obviousness rejection of claims 1, 2, 4, 5, 16, 18, and 19 over Huang in view of Mancusi and Bikson (Rejection P).

Likewise, we affirm Rejections Q, R, and S as presented in the Answer for the reasons stated above with respect to Rejection P. In this regard, Appellants do not contest the Examiner's reliance on the additionally cited prior art teachings as cited in Rejections Q, R, and S for teaching or suggesting the additional claimed features associated with the claims subjected to Rejections Q, R, and S. Rather, Appellants' arguments are principally based on the asserted shortcomings of Mancusi to teach or

suggest two potting steps as further buttressed by Appellants' reliance on the Runkle Declaration.

For the reasons discussed above, those arguments and their asserted evidentiary support are unpersuasive. Hence, we shall also affirm: (1) the Examiner's rejection of claim 17 under 35 U.S.C. § 103(a) as being unpatentable over Huang in view of Mancusi, Bikson, and Caskey (Rejection Q); (2) the Examiner's rejection of claims 21-24, 26, and 27 under 35 U.S.C. § 103(a) as being unpatentable over Huang in view of Mancusi, Bikson, and Applicants' admitted prior art (Rejection R); and the Examiner's rejection of claim 25 under 35 U.S.C. § 103(a) as being unpatentable over Huang in view of Mancusi, Bikson, Applicants' admitted prior art, and Caskey.

ORDER

The Examiner's decision is affirmed.

Appeal 2007-0838
Application 09/851,242

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv) (2007).

AFFIRMED

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